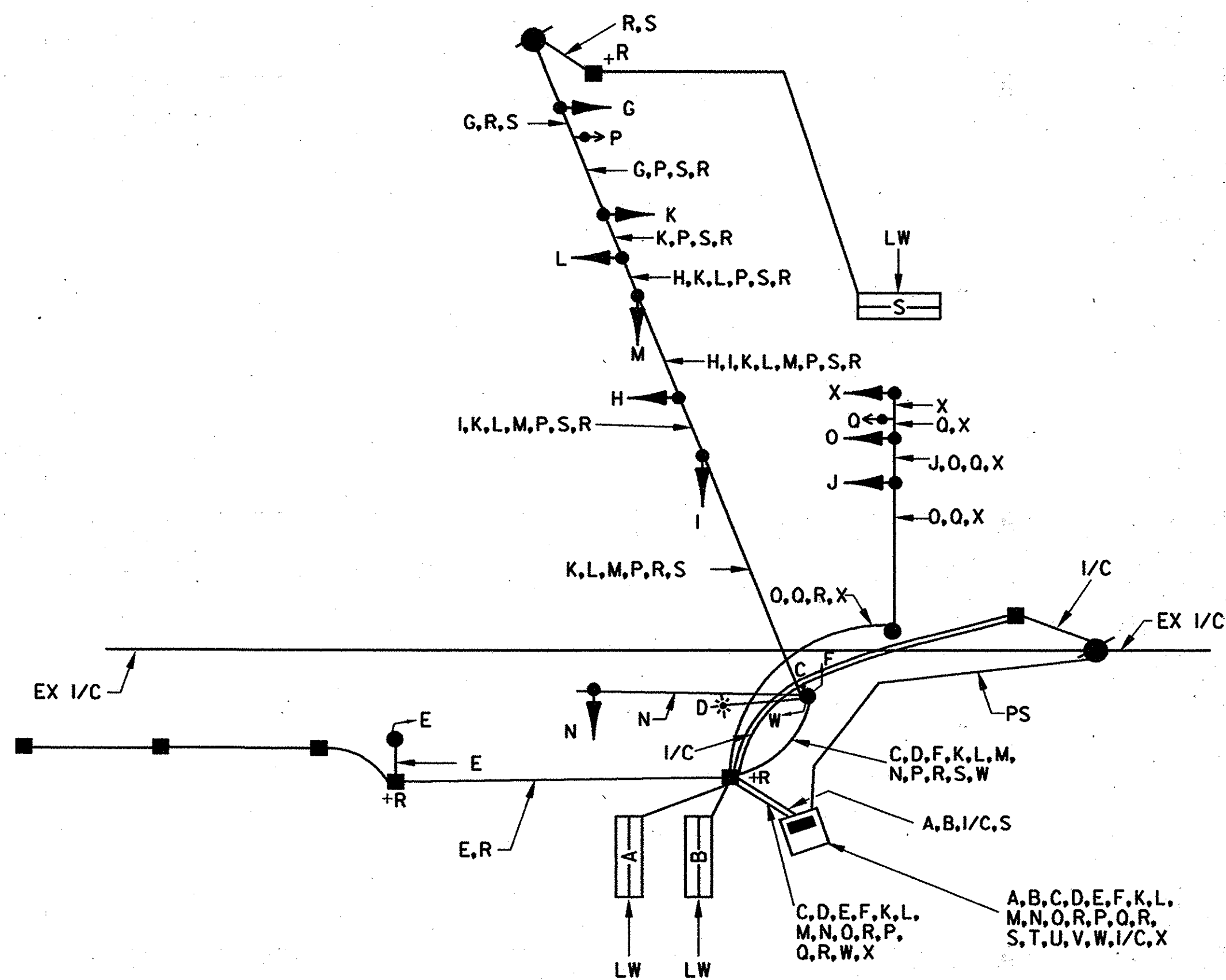


PHASE CHART

	1	2	3	4	5	6	9	
	(R)	(R)	(R)	(R)	(R)	(R)	(R)	
	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	
	(G)	(G)	(G)	(G)	(G)	(G)	(G)	
PHASE 1 + 6	R	R	G	G	R	R	R	
1 + 6 CHANGE	R	R	G	G	R	R	R	
PHASE 2 + 6	G	G	G	G	R	R	R	
2 + 6 CHANGE	Y	Y	Y	Y	R	R	R	
PHASE 4	R	R	R	R	G	G	G	
4 CHANGE	R	R	R	R	Y	Y	Y	
FLASHING	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	
OPERATION								
PRE-EMPTION PHASES								
PE NO. 1	R	R	G	G	R	R	R	
PE NO. 1 CHANGE	R	R	G	G	R	R	R	
PE NO. 2	G	G	G	G	R	R	R	
PE NO. 2 CHANGE	Y	Y	Y	Y	R	R	R	

WIRING DIAGRAM



WIRING KEY

A,B, } 2-CONDUCTOR ELECTRICAL CABLE (ALUMINUM SHIELDED)	G,H,I,J } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
C } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	K,L,M, } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
D } 2-CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)	P,O } 4-CONDUCTOR OPTICOM DETECTOR CABLE (NO. 20 A.W.G.)
W,E,F } 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	R } STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
T,U, } 1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)	

LW - LOOP WIRE (NO. 14 A.W.G.)
PS - PROPOSED UNDERGROUND SERVICE
+ - 3/4 IN. x 10 FT. GROUND ROD
EX I/C - EXISTING 12 PAIR COMMUNICATION CABLE, SELF SUPPORTING
I/C - EXISTING 12 PAIR COMMUNICATION CABLE, SELF SUPPORTING, REQUESTED FROM EXISTING CONTROLLER CABINET

PROJECT DESCRIPTION

GENERAL:

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING INTERSECTION TRAFFIC SIGNAL AND STREET LIGHTING AT MD 235 AND EXPLORATION PARK DR. IN ST. MARY'S COUNTY. MD 235 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION:

1. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA FOUR-PHASE, SEMI-TRAFFIC ACTUATED MODE, WITH THE MD 235 APPROACHES RUNNING CONCURRENTLY. EXCLUSIVE/PERMISSIVE LEFT TURN PHASING WILL BE PROVIDED FOR THE MD 235 NORTH BOUND APPROACH.

2. SPECIAL OPERATION

THE INTERSECTION WILL OPERATE AS INDICATED ABOVE UNLESS THE OPTICOM DEVICE IS ACTIVATED WHICH WILL PRE-EMPT THE TRAFFIC SIGNAL AND STOP THE EB APPROACH OF EXPLORATION PARK DR AND EITHER THE NB OR SB APPROACHES ON MD 235.

CONTROLLER REQUIREMENTS:

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH FOUR (4) FOUR-CHANNEL, TIME DELAY OUTPUT LOOP DETECTOR AMPLIFIERS. INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP, TELEMETRY MODULE, ISOLATION BOARD AND SPECIAL RELAY HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #5 ARE AS FOLLOWS:

MR. PAUL ARMSTRONG
DISTRICT ENGINEER
PHONE: 410-841-5450

MR. LAWRENCE E. ELLIOTT
ACTING ASSISTANT
DISTRICT ENGINEER - TRAFFIC
PHONE: 410-841-5450

MR. JOHN MAYS
UTILITY ENGINEER
PHONE: 410-841-5450

MR. RICHARD L. DAFF, SR.
CHIEF, TRAFFIC OPERATIONS DIVISION
PHONE: 410-787-7630

THE POWER COMPANY REPRESENTATIVE IS:
SOUTHERN MARYLAND ELECTRIC COOPERATIVE (SMECO)
PO BOX 1937
HUGHESVILLE, MD 20637-1937
301-274-3111

THIS SHEET NO. 163A
REPLACES SHEET NO. 163

PHASE I
TEMPORARY SIGNAL PLAN

SS-19

MDOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

LOG MILE # 18023513.13

DRAWN BY: DED/SMH
DES. BY: DK/DLA/SMH
CHK. BY: BJH

MD 235 @ EXPLORATION PARK DRIVE
SIGNAL PLAN

COUNTY: ST. MARY'S

DATE: APRIL, 2000 F.A.P. NO. SEE TITLE SHEET
SCALE: N.T.S. S.H.A. NO. SEE TITLE SHEET

TS/STD. NO.:
3787A-X1-G11

SHEET NO.
163A OF 241



RUMMEL, KLEPPER
& KAHL, LLP

CONSULTING ENGINEERS

81 MOSHER STREET
BALTIMORE, MARYLAND 21217

TELE: 410/728-2900 FAX: 410/728-3160

REVISIONS:	APPROVALS:
	CHIEF SIGNAL DESIGN SECTION
	ASST. DISTRICT ENGINEER - TRAFFIC
	CHIEF TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR OFFICE OF TRAFFIC & SAFETY

2	REDLINE REVISION NO. 2 ADDED SHEET SHA No.: SM7685270 / / 2000
A	Nov. 1, 1998 Reconstruct Due To New Geometrics. SHA No.: SM7685270